

REMARKS

Original claims 1-112 were pending in the application.

Claims 1-7, 14, 16-18, 29-35, 42-45, 57-63, 70, 72, 73, 85-91, 97, 98, 100, and 101 stand rejected.

Claims 8-13, 15, 19-28, 36-41, 46-56, 64-69, 71, 74-84, 92-96, 99, and 102-112 are under objection.

No claims have been canceled.

Claim 113 has been added.

Accordingly, claims 1-113 are currently pending.

Claim 97 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-3, 29-31, 57-59, and 85-87 stand rejected under 35 U.S.C. § 102(e) as being unpatentable over U.S. Patent No. 6,430,150 issued to Azuma et al. ("*Azuma*"). Claims 4-7, 14, 16-18, 32-35, 42, 44, 45, 60-63, 70, 72, 73, 88-91, 98, 100, and 101 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Azuma* in view of U.S. Patent No. 6,728,205 issued to Finn et al. ("*Finn*"). Applicant respectfully submits that the claims are patentable and respectfully requests reconsideration of the pending rejections and objections in view of the amendments and remarks presented herein.

Formal Matters

The Examiner has indicated that some of the non-patent literature previously submitted in an Information Disclosure Statement “are not considered for the examination because they are not available.” Applicant respectfully notes that these references had been previously considered in U.S. Patent Application No. 09/232,397, now U.S. Patent No. 6,856,627 (the ‘627 patent), and appear on the face of that issued patent. The present application is a continuation-in-part of U.S. Patent Application No. 09/858,743, which is a continuation-in-part of the ‘627 patent. Applicant respectfully calls the Examiner’s attention to MPEP § 609, subsection (I)(A)(2), which clarifies that “[t]he examiner will consider information which has been considered by the Office in a parent application when examining . . . a continuation-in-part application filed under 37 CFR 1.53(b).”

Accordingly, notwithstanding the Examiner’s statement, Applicant understands that the previously submitted literature will be considered in the present application, having been previously considered in a parent application (‘627 patent). Nonetheless, for the convenience of the Examiner, Applicant submits herewith a supplemental Information Disclosure Statement and includes duplicate copies of the non-patent literature in question.

The Abstract and claims 1, 4, 8, 13, 18, 20, 21, 29, 32, 36, 41, 42, 48, 52, 57, 60, 64, 69, 76, 85, 88, 92, 94, 97, 104, and 112 have been amended to correct informalities and to more clearly describe the invention. The amendments add no new matter and are fully supported by the specification as originally filed.

Allowable Subject Matter

The Examiner has objected to claims 8-13, 15, 19-28, 36-41, 46-56, 64-69, 71, 74-84, 92-96, 99, and 102-112 as being dependent upon a rejected base claim, but has indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. In the bottom paragraph of page 6 of the Office Action, the Examiner has similarly indicated the allowability of claim 43. The Examiner has also indicated the allowability of claim 97 if rewritten to overcome the rejection(s) under § 112, second paragraph, and to include all of the limitations of the base claim and any intervening claims.

New claim 113 is in independent form and includes all of the limitations of original claim 36. Accordingly, Applicant respectfully submits that new claim 113 is allowable. Although Applicants have not elected to amend claims 8-13, 15, 19-28, 36-41, 43, 46-56, 64-69, 71, 74-84, 92-97, 99, and 102-112 into independent form at the present time, Applicants wish to express their appreciation for the Examiner's indication of allowable subject matter and reserve the right to so amend the claims at a later time.

Objection to the Drawings

The Examiner has objected to the Drawings as having incomplete legends in FIGs. 1 and 7. Applicant calls the Examiner's attention to the formal drawings submitted for this application on November 19, 2001, and submits that the submitted drawings have complete legends. Accordingly, Applicant respectfully requests clarification regarding the nature of the Examiner's objection. Alternatively, Applicant respectfully requests that the objection to the Drawings be withdrawn.

Objection to the Specification

The Examiner has objected to the Abstract for including the title of the invention on the same page. The Abstract has been amended accordingly, and Applicant respectfully requests that the objection to the Abstract be withdrawn.

Objections to the Claims

The Examiner has objected to informalities in claims 18 and 94. Claim 18 has been amended and now depends on claim 8. Claim 94 has been amended and now depends on claim 92. Applicant submits that the informalities have been corrected, and respectfully requests that the objections to the claims be withdrawn.

Rejection Under 35 U.S.C. § 112, second paragraph

Claim 97 stands rejected under § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner stated that various claim terms lacked sufficient antecedent basis. Claim 97 has been amended and now depends on claim 92. Applicant submits that the claim language in amended claim 97 does not lack antecedent basis, and respectfully requests that the rejection under § 112, second paragraph be withdrawn.

Rejections Under 35 U.S.C. § 102(e)

Claims 1-3, 29-31, 57-59, and 85-87 stand rejected under § 102(e) as being unpatentable over *Azuma*. While not conceding that the Examiner's cited references qualify as prior art, but instead to expedite prosecution, Applicant has chosen respectfully to address the Examiner's rejection as follows. Applicant reserves the right, for example in a continuing application, to establish that the Examiner's cited reference does not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed.

Azuma is related to networks that use cross-connect units at telecommunications nodes, and to automatic restoration in a telecommunications network. *Azuma* at col. 1, lines 7-10. *Azuma* does not, however, disclose all of the limitations of the pending claims.

For example, *Azuma* describes a system with a failure type determining part 12 and an alternate path computing part 14. *Azuma* at col. 8, lines 14-18. "In response to the determination by the failure type determining part 12, the alternate path computing part 14 computes topology

information to find alternate paths by referring to the physical topology information and the logical topology information.” *Id.* The *Azuma* network is cross-connected based on this computation. *Id.* at col. 8, lines 19-23. “After the node executes the cross-connection process, the cross-connection confirming parts 18 in the nodes work in cooperation so as to confirm whether or not the alternate paths set can operate properly.” *Id.* at col. 8, lines 23-26 (emphasis added). Thus, the *Azuma* system reconnects an alternate path *before* confirming whether the alternate path can operate properly.

Independent claim 1 is directed to a method for restoring a virtual path in an optical network, and includes a limitation of identifying a plurality of nodes with resources. The identified nodes have a resource necessary to support a virtual path. The claim also includes a limitation of identifying an alternate physical path in response to identifying the plurality of nodes with resources. Thus, identifying the alternate physical path is concluded *after* identifying the plurality of nodes with resources. These limitations are neither described, taught, nor suggested by *Azuma*. Thus, independent claim 1 is allowable over the cited art. Independent claims 29, 57, and 85 are allowable at least for similar reasons. Claims 2-3, 30-31, 58-59, and 86-87 depend directly or indirectly from claims 1, 29, 57, and 85, and are therefore also allowable for at least similar reasons, being dependent upon allowable base claims. Accordingly, Applicant respectfully requests that the rejections under § 102(e) to claims 1-3, 29-31, 57-59, and 85-87 be withdrawn.

The Rejection of Claims Under 35 U.S.C. §103(a)

Depends Upon an Improper Combination of References

Claims 4-7, 14, 16-18, 32-35, 42, 44, 45, 60-63, 70, 72, 73, 88-91, 98, 100, and 101 stand rejected under § 103(a) as being unpatentable over *Azuma* in view of *Finn*. While not conceding that the Examiner's cited references qualify as prior art, but instead to expedite prosecution, Applicant has chosen respectfully to address the Examiner's rejection as follows. Applicant reserves the right, for example in a continuing application, to establish that one or more of the Examiner's cited references do not qualify as prior art as to an invention embodiment previously, currently, or subsequently claimed.

With regard to claim 4, the Examiner has observed that *Azuma* fails to disclose provisioning a virtual path on a physical path between a first and a second node of an optical network, where each one of the nodes is coupled to at least one other of the nodes by a plurality of optical links. Office Action of April 5, 2005, at p. 4, line 21—p. 5, line 1. The Examiner proposes that this limitation is met in the cited art because it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of *Azuma* to be used in the optical network of *Finn*. *Id.* at p. 5, lines 2-4. Applicant respectfully disagrees.

As noted above, *Azuma* is related to networks that use cross-connect units at telecommunications nodes, and to automatic restoration in a telecommunications network. *Azuma* at col. 1, lines 7-10. *Finn* relates to communication or power networks and to automatic protection switching in networks. *Finn* at col. 1, lines 17-20.

Applicant offers that the references *Azuma* and *Finn* were improperly used in combination under § 103(a) for the rejection of claim 4. For example, there is no proper motivation to modify the references as suggested. As explained in the Manual of Patent Examination and Procedure (MPEP), references may be modified in a rejection under § 103(a) “where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” MPEP § 2143.01, discussing *In re Kotzab*, 217 F.3d 1365, (Fed. Cir. 2000). However, “[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.” *Id.*, discussing *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990).

The Examiner suggests that the motivation for modifying the system of *Azuma* in view of *Finn* would be “to get the benefit of high-speed network communications through fiber optic cables so that a prompt restoration is achieved through high-speed fiber optic communications.” Office Action of April 5, 2005, at p. 5, lines 4-7. Applicant respectfully disagrees that the Examiner’s proffered observations provide adequate motivation under § 103(a) to modify the cited references.

Applicant respectfully submits that even assuming the Examiner’s characterization of the cited art is correct (and Applicant does not concede this point), these observations would not motivate a person having skill in the art to modify *Azuma* in view of *Finn*, because *Azuma* by itself presents the advantages suggested by the Examiner. *Azuma* discusses networks that use high-speed communications. *Azuma* at col. 1, lines 11-14. *Azuma* discusses technology related to restoration of computer networks. *Id.* at Abstract. *Azuma* discusses the use of optical signals in networks and the detection of failures in optical links. *Id.* at col. 9, lines 21-23. Thus, a

person having skill in the art would not be motivated to look beyond *Azuma* to *Finn* in order “to get the benefit of high-speed network communications through fiber optic cables so that a prompt restoration is achieved through high-speed fiber optic communications,” as suggested by the Examiner.

Since the Examiner has not presented a proper motivation for the modification of *Azuma* in view of *Finn*, the Examiner has failed to make a prima facie case for obviousness in the rejection of claim 4. Further, Applicant sees no other reason to make the modifications proposed in the Office Action. At least for similar reasons, the Examiner has failed to make a prima facie case for obviousness in the rejection of claims 5-7, 14, 16-18, 32-35, 42, 44, 45, 60-63, 70, 72, 73, 88-91, 98, 100, and 101. Accordingly, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

*The Rejection of Claims Under 35 U.S.C. §103(a) Depends
on References that Do Not Teach Each Limitation of the Claims*

Additionally, even if the modification of *Azuma* in view of *Finn* were proper under § 103(a), neither *Azuma* nor *Finn*, taken either separately or in conjunction, describe, teach, or suggest all of the limitations of the claimed invention. First, as discussed above, *Azuma* does not present the identification of an alternate physical path in response to identifying a plurality of nodes with resources. This observation applies with equal weight to all of the pending rejections under § 103(a).

Further, such an identification is also not present in *Finn*. *Finn* relates to communication or power networks and to automatic protection switching in networks. *Finn* at col. 1, lines 17-20. *Finn* provides approaches for pre-planning or pre-computing redundant network connections that can be used when a link or a node fails in a network path. *Id.* at col. 6, lines 38-41, 45-64;

col. 1, lines 44-49. The *Finn* system uses such redundancy to provide that in the event that a node fails, the remaining nodes may still be connected. *Id.* at col. 6, line 64—col. 7, line 1. The computing of the redundant network connections is carried out by an automatic protection switch (APS) processor. *Id.* at col. 15, lines 36-42. The APS processor in *Finn* calculates the redundant network connections using information and other rules provided to the APS processor. *Id.* Several factors are listed in *Finn* as examples of information that may be provided to the APS processor for consideration: the number of nodes to be connected in the network, the number of links which exist in the network, traffic load, and information identifying which paths are available to connect particular nodes. *Id.* at col. 15, lines 18-25. Another piece of information indicates which nodes and links should be used for rerouting in the event of a failure. *Id.* at col. 15, lines 24-25.

Finn does not, however, present any considerations that should be used for determining which nodes and links should be used for rerouting in the event of a failure. The APS processor in *Finn* may be instructed on which nodes and links should be used for rerouting, but *Finn* does not describe any decision-making to identify appropriate nodes. *Finn* does not discuss the selection of appropriate nodes for rerouting, either by the APS processor or by other components that may provide information to the APS processor. In particular, *Finn* does not describe, teach, or suggest the identification of an alternate physical path in response to identifying a plurality of nodes with resources.

Claim 4 depends on claim 2, which depends in turn on claim 1, and thus includes the limitation of identifying an alternate physical path in response to the identifying the plurality of nodes with resources. This limitation, among others, is not present in *Finn*. As discussed above, this limitation is also not present in *Azuma*. Therefore, the cited art does not disclose all the limitations of claim 4, and claim 4 is allowable. At least for similar reasons, claims 32, 60, and

88 are also allowable. Claims 5-7, 14, 16-18, 33-35, 42, 44, 45, 61-63, 70, 72, 73, 87-91, 98, 100, and 101 depend directly or indirectly on claims 1, 32, 60, and 88, and are therefore also allowable at least for the same reasons, being dependent upon allowable base claims.

Accordingly, for this reason as well, Applicant respectfully requests that the rejections under § 103(a) be withdrawn.

Claim 43

Claim 43 was indicated as being under rejection in the Office Action Summary of the Office Action dated April 5, 2005. This indication appears to be a typographical error, since the only remarks in the Office Action regarding claim 43 appear to be an indication of allowability at the bottom paragraph of page 6. Applicant submits that claim 43 is allowable. Accordingly, Applicant respectfully requests clarification regarding the grounds of the rejection of claim 43, or alternatively, that the rejection of claim 43 be withdrawn.

CONCLUSION

Applicant submits that all claims are now in condition for allowance, and an early notice to that effect is earnestly solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is requested to telephone the undersigned.

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P. O. Box 1450, Alexandria, Virginia, 22313-1450, on 2005 June 21.

C. Bharucha 2005 June 21
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Respectfully submitted,



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